

*English Translation by Machine***PATENT ABSTRACTS OF JAPAN***for 10/085,778**Single motor*

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(71)Applicant : MURATA MACH LTD

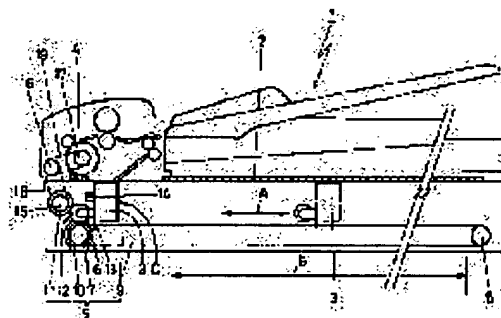
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(72)Inventor : KONISHI DAISHI

(54) IMAGE READER**(57)Abstract:**

PROBLEM TO BE SOLVED: To provide an image reader in which one drive motor is used in common for moving a scanner and for driving rotation of an original feed roller.

SOLUTION: In an image reader having a scanner 3 provided freely and movably from a still original read area B to a continuous original read position C and an original feed roller 4 for a continuous original read, one of a drive motor 6 that moves the scanner 3 and drives the rotation of the original feed roller 4 via a transmission mechanism 5 is provided and the transmission mechanism 5 moves the scanner in the still original read area B in the case of reading a still original, stops the scanner 3 at the continuous original read position C in the case of reading a continuous original and drives the rotation of the original feed roller 4.

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middle gear does not gear on a drive gear and a follower gear at the time of quiescence manuscript reading, Since a belt with a gear tooth does not gear with a driving pulley while the driving force of a motor transmits to a belt with a gear tooth through a driving pulley, moving scanner equipment and a middle gear's gearing on a drive gear and a follower gear at the time of continuation manuscript reading, The driving force of a motor carries out sequential transfer at a drive gear, a middle gear, and a follower gear, and only a manuscript delivery roller is rotated.

[0009] This invention may be equipped with the stopper for making said scanner equipment stand it still by the continuation manuscript reading station.

[0010]

[Embodiment of the Invention] Hereafter, the image reader concerning this invention is explained based on the gestalt of operation shown in a drawing.

[0011] (Gestalt of the 1st operation) The side elevation in which drawing 1 thru/or drawing 3 show the gestalt of operation of the 1st of this invention, and drawing 1 shows the whole outline and which carried out the middle abbreviation, the side elevation in which drawing 2's being what expanded the important section, and showing the condition of rotating only a ***** manuscript delivery roller, and drawing 3 are the side elevations in which being what expanded the important section and showing the condition of moving only ***** scanner equipment.

[0012] The image reader 1 **** a quiescence manuscript reading function and a continuation manuscript reading function, as shown in drawing 1 . It scans and reads with the scanner equipment 3 which was equipped with the light source which carries out both-way migration of the manuscript (illustration abbreviation) placed on platen glass 2 in the direction of vertical scanning (the direction of arrow mark A) under platen glass 2 in quiescence manuscript reading. In continuation manuscript reading, the manuscript sent one sheet at a time is scanned and read with the rotating manuscript delivery roller 4 with the scanner equipment 3 which stands it still to the continuation manuscript reading station C.

[0013] The description of this image reader 1 is the ability to have chosen migration of scanner equipment 3 and rotation of the manuscript delivery roller 4 by the motor 6 for a drive of a piece through the driving mechanism 5. A driving mechanism 5 carries out both-way migration of the scanner equipment 3 in the quiescence manuscript reading field B at the time of quiescence manuscript reading, and it is constituted so that only the manuscript delivery roller 4 may be rotated, while making the continuation manuscript reading station C suspend scanner equipment 3 at the time of continuation manuscript reading.

[0014] The pulleys 7 and 8 for belts with a gear tooth which have arranged this driving mechanism 5 to the both-ends approach of the direction of vertical scanning (the direction of arrow mark A), It lays between both the pulleys 7 and 8. Connection 13 to scanner equipment 3 The belt 9 with a gear tooth of the shape of endless [which was carried out], It has the middle gear 12 arranged between the drive gear 10 which connects with output-shaft 6a of the motor 6 shown in drawing 2 , and is rotated to a driving pulley 7 and one, the follower gear 11 which rotates the manuscript delivery roller 4, and the drive gear 10 and the follower gear 11. The middle gear 12 is intermediary **** [as] which gears on the drive gear 7 and the follower gear 8 only when it is attached in scanner equipment 3 free [rotation] and scanner equipment 3 reaches the continuation manuscript reading station C. The belt 9 with a gear tooth has formed toothless field 9b which lacked gear-tooth 9a so that it might not gear with a driving pulley 7, when scanner equipment 3 reaches the continuation manuscript reading station C.

[0015] The above-mentioned middle gear 12 moves to the continuation manuscript reading station C with Mukai or the scanner equipment 3 which carries out intermediary migration in connection with a driving pulley 7 rotating in the direction of arrow mark F by the drive of a motor 6, and starts engagement with the drive gear 10 and the follower gear 11. Since the middle gear 12 which started engagement is energized in the direction of arrow mark E in response to the transfer force from the drive gear 10, it maintains the stable engagement. Furthermore, in response to this energization force, scanner equipment 3 contacts so that a stopper 14 may be pressed, and it maintains a idle state. Since toothless field 9b of the belt 9 with a gear tooth winds around a driving pulley 7 and makes a driving pulley 7 idle when scanner equipment 3 has stopped in contact with a stopper 14, driving force of a motor 6 is not made to transmit to the belt 9 with a gear tooth.

[0016] In order to move the scanner equipment 3 of a continuation manuscript reading condition which has stopped to the continuation manuscript reading station C to the quiescence manuscript reading field B, inverse rotation of the motor 6 is carried out. If the drive gear 10 and a driving pulley 7 rotate in the direction of arrow

mark G by the inverse rotation of a motor 6, the middle gear 12 will be energized in the direction of arrow mark H by the transfer force from the drive gear 10, and will start migration with scanner equipment 3 and the belt 9 with a gear tooth. As shown in drawing 3, the belt 9 with a gear tooth which started migration starts engagement of gear-tooth 9a to a driving pulley 7, moves scanner equipment 3 in the direction of arrow mark H, and is led to the quiescence manuscript reading field B (refer to drawing 1).

[0017] In addition, said middle gear 12 is not limited to the structure attached in scanner equipment 3, and it is also illustratable to arrange so that ***** sliding of the migration direction of scanner equipment 3 may be attained between the non-engagement locations which do not gear on the engagement location where ***** gears on the drive gear 10 and the follower gear 11, and both the gears 10 and 11. The middle gear 12 in this case is energized by the non-engagement location with a Mukai or intermediary spring, when scanner equipment 3 is located in the quiescence manuscript reading field B, and when scanner equipment 3 reaches the continuation manuscript reading station C, it is constituted so that the energization force of this spring may be resisted, it may be pressed with scanner equipment 3 and it may move to an engagement location.

[0018] As shown in drawing 1, while said follower gear 11 lays [firmly] the belt 18 with a gear tooth across the follower gear 11, the pulley 15 which rotates to one, and the middle pulley 16, it lays [firmly] the belt 19 with a gear tooth across the middle pulley 16, the manuscript delivery roller 4, and the pulley 17 that rotates to one, and it is made to have transmitted the driving force from a motor 6 to the manuscript delivery roller 4. In addition, it constitutes so that it may rotate to the manuscript delivery roller 4 and one, and the follower gear 11 can also omit middle pulley 16 grade.

[0019] Although the thing of the format which included the light source and a photo detector in one, and illustration omitted said scanner equipment 3, while moving the light source by the belt 9 with a gear tooth, a reflecting mirror is moved at the rate of the one half of the passing speed of the light source, and the thing of the format which receives the reflected light by the photo detector placed in a fixed position is chosen suitably.

4 [0020] (Gestalt of the 2nd operation) Drawing 4 is the side elevation showing [showing the gestalt of operation of the 2nd of the image reader concerning this invention, and] the condition of moving scanner equipment which carried out the partial notch.

→ [0021] The point that the gestalt of this operation is different from the gestalt of said 1st operation is a driving mechanism 20. It is having made it mesh the drive gear 22 alternatively on either a driving pulley 7, the follower gear 21 rotated to one and the follower gear 11 while what does not have a toothless field in the belt 9 with a gear tooth is used for a driving mechanism 20 so that a driving pulley 7 and the belt 9 with a gear tooth may always get into gear. Structures other than this difference are substantially [as the gestalt of said 1st operation] the same, and the same sign shows the same configuration member.

[0022] While supporting the above-mentioned drive gear 22 to revolve free [rotation] on the arm 23 supported pivotably free [rocking] focusing on output-shaft 6a of the motor 6 for a drive, it is made to have geared with the output gear 24 which fixed to output-shaft 6a. The drive gear 22 moves by actuation of the actuation implement 25 which consists of a solenoid which makes an arm 23 rock. At the time of quiescence manuscript reading, both-way migration of the scanner equipment 3 is carried out in the quiescence manuscript reading field B (refer to drawing 1) by meshing the drive gear 22 on the follower gear 21. On the contrary, at the time of continuation manuscript reading, the manuscript delivery roller 4 is rotated by meshing the drive gear 22 on the follower gear 11 immediately after making scanner equipment 3 reach the continuation manuscript reading station C.

[0023]

[Effect of the Invention] Since the image reader concerning this invention according to claim 1 makes migration of scanner equipment and rotation of a manuscript delivery roller serve a double purpose by the motor for a drive of a piece, it can aim at reduction of cost, and mitigation of weight.

[0024] Since it is realizable with easy structure, the image reader concerning this invention according to claim 2 can aim at reduction of cost, and mitigation of weight further.

[0025] The image reader concerning this invention according to claim 3 becomes unnecessary [the sensor for making scanner equipment stand it still etc.].

[Translation done.]

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CLAIMS

[Claim(s)]

[Claim 1] In the image reader equipped with the scanner equipment formed free [migration] from the quiescence manuscript reading field to the continuation manuscript reading station, and the manuscript delivery roller for continuation manuscript reading It has the motor for a drive of the piece which performs migration of scanner equipment and rotation of a manuscript delivery roller through a driving mechanism. This driving mechanism The image reader characterized by making it rotate a manuscript delivery roller while moving scanner equipment in a quiescence manuscript reading field at the time of quiescence manuscript reading and making a continuation manuscript reading station suspend scanner equipment at the time of continuation manuscript reading.

[Claim 2] The driving pulley which gears to the belt with a gear tooth to which said driving mechanism moves said scanner equipment, The drive gear which connects with said motor and is rotated to this driving pulley and one, It has the follower gear which rotates said manuscript delivery roller, and the middle gear which moves with scanner equipment and gears on a drive gear and a follower gear when said scanner equipment reaches a continuation manuscript reading station. The belt with a gear tooth is the image reader according to claim 1 which formed the toothless field so that it might not gear with a driving pulley, when scanner equipment reached a continuation manuscript reading station.

[Claim 3] The image reader [equipped with the stopper for making said scanner equipment stand it still by the continuation manuscript reading station] according to claim 1 or 2.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the image reader for reading the image indicated by the manuscript.

[0002]

[Description of the Prior Art] An image reader has some which ****(ed) the quiescence manuscript reading function and the continuation manuscript reading function. In quiescence manuscript reading, the manuscript placed on platen glass is scanned and read in the direction of vertical scanning under platen glass with the scanner equipment which carries out both-way migration. In continuation manuscript reading, the manuscript sent one sheet at a time is scanned and read with the rotating manuscript delivery roller with the scanner equipment which stands it still to a continuation manuscript reading station.

[0003] The conventional image reader had formed the motor for a drive for making it move from a quiescence manuscript reading field to a continuation manuscript reading station, and the motor for a drive for rotating a manuscript delivery roller according to the individual while carrying out both-way migration of the scanner equipment in the quiescence manuscript reading field.

[0004]

[Problem(s) to be Solved by the Invention] However, forming the motor for a scanner equipment drive and the motor for a manuscript delivery roller drive according to an individual has the problem which becomes weight size while becoming cost quantity. Then, this invention offers the image reader which made migration of scanner equipment and rotation of a manuscript delivery roller serve a double purpose by the motor for a drive of a piece.

[0005]

[Means for Solving the Problem] In the image reader equipped with the scanner equipment which established the means which this invention adopted free [migration] from the quiescence manuscript reading field to the continuation manuscript reading station, and the manuscript delivery roller for continuation manuscript reading It has the motor for a drive of the piece which performs migration of scanner equipment and rotation of a manuscript delivery roller through a driving mechanism. This driving mechanism While moving scanner equipment in a quiescence manuscript reading field at the time of quiescence manuscript reading and making a continuation manuscript reading station suspend scanner equipment at the time of continuation manuscript reading, it is having made it rotate a manuscript delivery roller.

[0006] ***** can perform migration of scanner equipment and rotation of a manuscript delivery roller to this invention by the motor for a drive of a piece, and can choose migration of the scanner equipment in the quiescence manuscript reading field at the time of being quiescence manuscript reading, and a halt of the scanner equipment in the continuation manuscript reading station at the time of continuation manuscript reading and rotation of a manuscript delivery roller as it by the driving mechanism.

[0007] The driving pulley which gears to the belt with a gear tooth to which said driving mechanism moves said scanner equipment, The drive gear which connects with said motor and is rotated to this driving pulley and one, It has the follower gear which rotates said manuscript delivery roller, and the middle gear which moves with scanner equipment and gears on a drive gear and a follower gear when said scanner equipment reaches a continuation manuscript reading station. When scanner equipment reaches a continuation manuscript reading station, the belt with a gear tooth may form a toothless field so that it may not gear with a driving pulley.

[0008] When said driving mechanism is equipped with said belt with a gear tooth, a middle gear, etc. Since a

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the side elevation showing [showing the gestalt of operation of the 1st of this invention, and] the whole outline which carried out the middle abbreviation.

[Drawing 2] It is the side elevation in which being what expanded the important section in the gestalt of this operation, and showing the condition of rotating only ***** and a manuscript delivery roller.

[Drawing 3] It is the side elevation in which being what expanded the important section in the gestalt of this operation, and showing the condition of moving only ***** and scanner equipment.

[Drawing 4] It is the side elevation showing [being what expanded the important section in the gestalt of operation of the 2nd of this invention, and] the condition of moving ***** and scanner equipment which carried out the partial notch.

[Description of Notations]

3 -- Scanner equipment

4 -- Manuscript delivery roller for continuation manuscript reading

5 -- Driving mechanism

6 -- Motor for a drive

B -- Quiescence manuscript reading field

C -- Continuation manuscript reading station

[Translation done.]

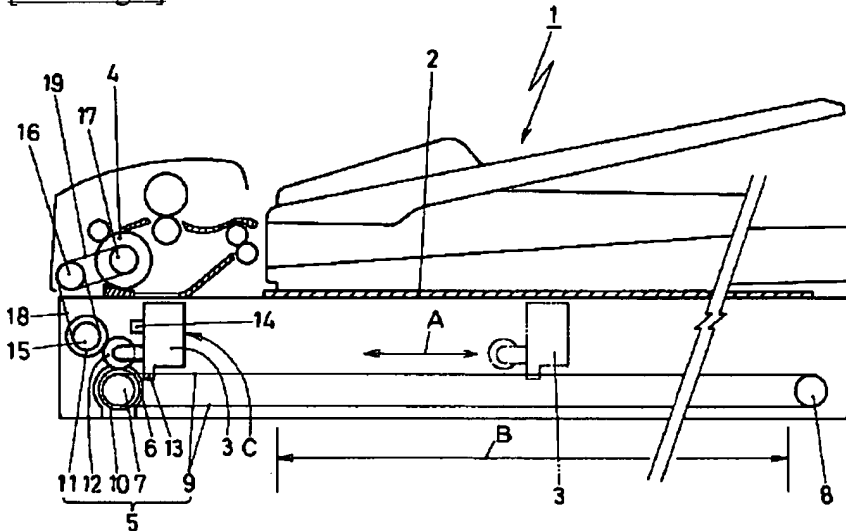
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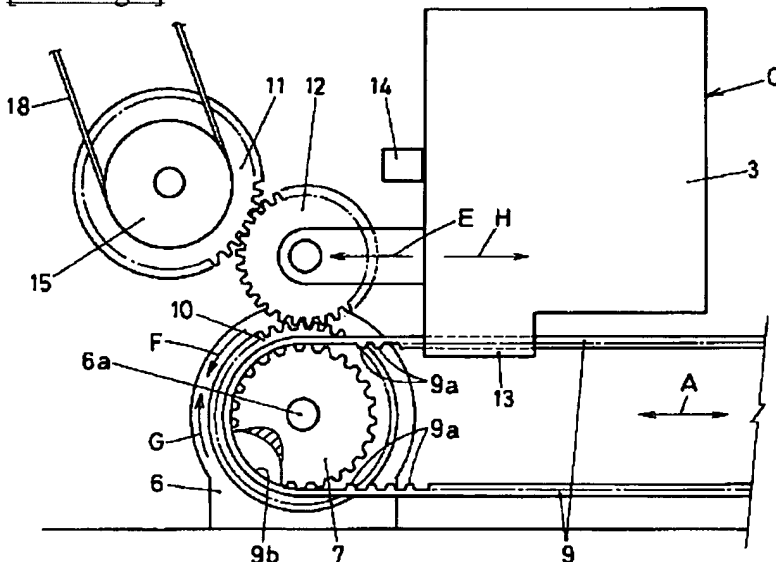
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DRAWINGS

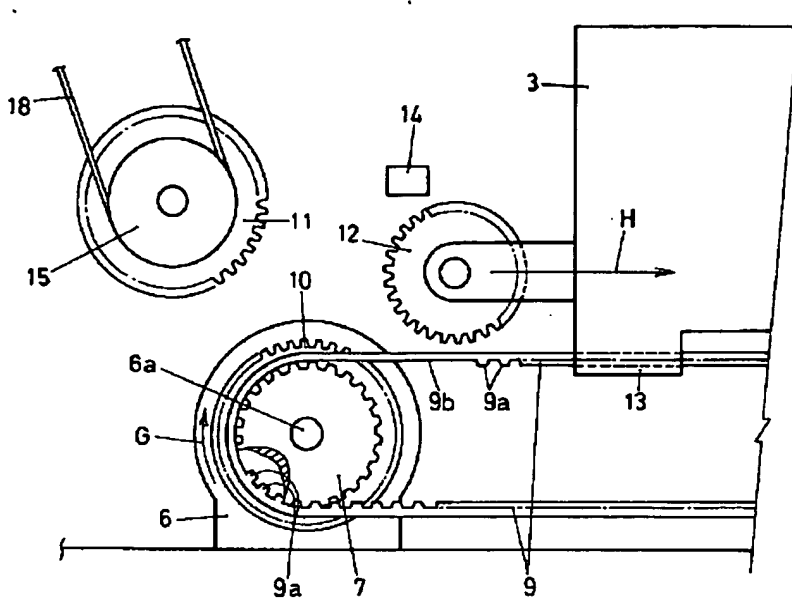
[Drawing 1]



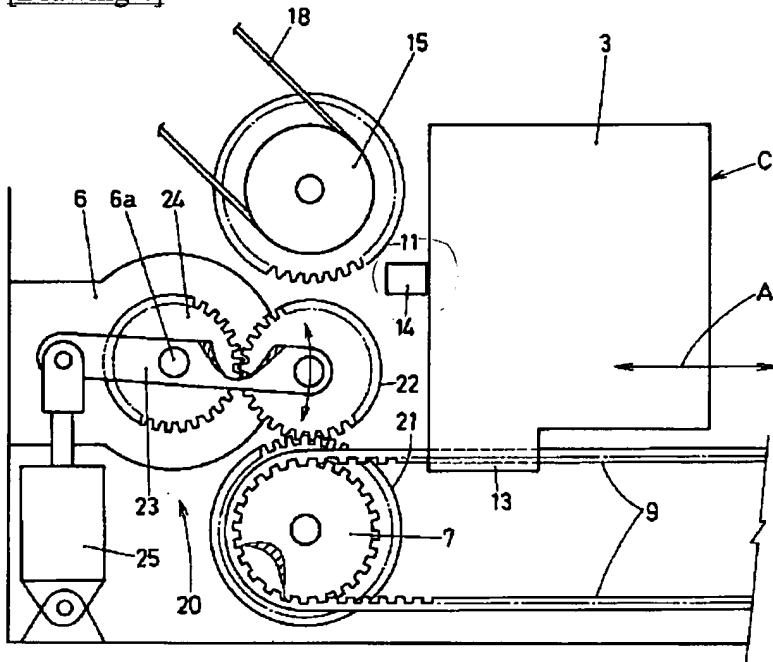
[Drawing 2]



[Drawing 3]



[Drawing 4]



[Translation done.]

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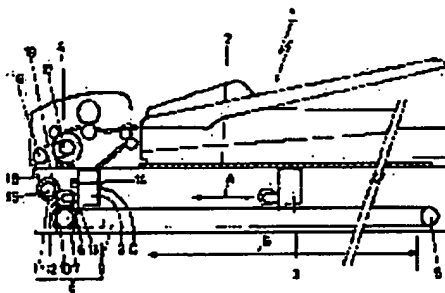
(72)Inventor : KONISHI DAISHI

(54) IMAGE READER

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an image reader in which one drive motor is used in common for moving a scanner and for driving rotation of an original feed roller.

SOLUTION: In an image reader having a scanner 3 provided freely and movably from a still original read area B to a continuous original read position C and an original feed roller 4 for a continuous original read, one of a drive motor 6 that moves the scanner 3 and drives the rotation of the original feed roller 4 via a transmission mechanism 5 is provided and the transmission mechanism 5 moves the scanner in the still original read area B in the case of reading a still original, stops the scanner 3 at the continuous original read position C in the case of reading a continuous original and drives the rotation of the original feed roller 4.



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(71) 出願人 000006297

村田機械株式会社

京都府京都市南区吉祥院南落合町3番地

(72) 発明者 小西 題阿

京都市伏見区竹田向代町136番地 村田機

械株式会社本社工場内

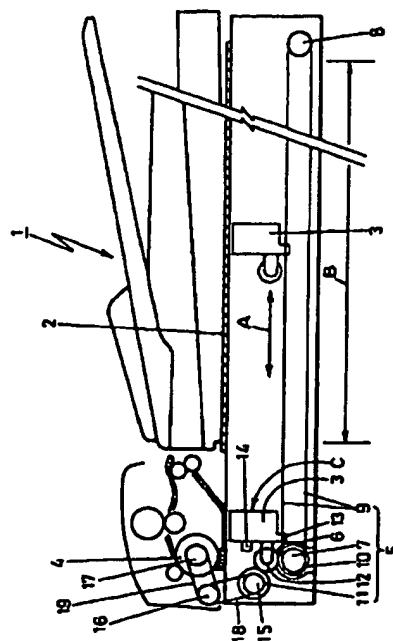
(74) 代理人 弁理士 内田 敏彦

(54) 【発明の名称】 画像読取装置

(57) 【要約】

【課題】 スキャナ装置の移動と原稿送りローラの回転とを一個の駆動用モータで兼用するようにした画像読取装置。

【解決手段】 静止原稿読取領域Bから連続原稿読取位置Cまで移動自在に設けたスキャナ装置3と、連続原稿読取用原稿送りローラ4とを備えた画像読取装置において、スキャナ装置3の移動及び原稿送りローラ4の回転を伝動機構5を介して行う一個の駆動用モータ6を備え、伝動機構5は、静止原稿読取のときには静止原稿読取領域Bでスキャナ装置を移動させ、連続原稿読取のときには連続原稿読取位置Cにスキャナ装置3を停止させると共に原稿送りローラ4を回転させるようにしたことである。



【特許請求の範囲】

【請求項1】 静止原稿読取領域から連続原稿読取位置まで移動自在に設けたスキヤナ装置と、連続原稿読取用原稿送りローラとを備えた画像読取装置において、スキヤナ装置の移動及び原稿送りローラの回動を伝動機構を介して行う一個の駆動用モータを備え、該伝動機構は、静止原稿読取のときには静止原稿読取領域でスキヤナ装置を移動させ、連続原稿読取のときには連続原稿読取位置にスキヤナ装置を停止させると共に原稿送りローラを回動させるようにしたことを特徴とする画像読取装置。

【請求項2】 前記伝動機構は、前記スキヤナ装置を移動させる歯付ベルトに噛合する駆動プーリと、前記モータに連結し且つ該駆動プーリと一体に回転する駆動ギヤと、前記原稿送りローラを回動させる従動ギヤと、前記スキヤナ装置が連続原稿読取位置に到達するときにスキヤナ装置と共に移動して駆動ギヤと従動ギヤとに噛合する中間ギヤとを備え、歯付ベルトは、スキヤナ装置が連続原稿読取位置に到達したときに駆動プーリと噛合しないように欠歯領域を形成した請求項1記載の画像読取装置。

【請求項3】 前記スキヤナ装置を連続原稿読取位置で静止させるためのストッパを備えた請求項1又は2記載の画像読取装置。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、原稿に記載されている画像を読み取るための画像読取装置に関するものである。

【0002】

【従来の技術】 画像読取装置は、静止原稿読取機能と連続原稿読取機能とを併備したものがある。静止原稿読取の場合には、プラテンガラス上に置かれている原稿を、プラテンガラスの下で副走査方向へ往復移動するスキヤナ装置で走査して読み取る。連続原稿読取の場合には、回転する原稿送りローラで一枚ずつ送られる原稿を、連続原稿読取位置に静止するスキヤナ装置で走査して読み取る。

【0003】 従来の画像読取装置は、スキヤナ装置を静止原稿読取領域で往復移動させると共に静止原稿読取領域から連続原稿読取位置まで移動させるための駆動用モータと、原稿送りローラを回動させるための駆動用モータとを個別に設けていた。

【0004】

【発明が解決しようとする課題】 しかし、スキヤナ装置駆動用モータと原稿送りローラ駆動用モータとを個別に設けることは、コスト高になると共に重量大になる問題がある。そこで、本発明は、スキヤナ装置の移動と原稿送りローラの回動とを一個の駆動用モータで兼用するようにした画像読取装置を提供するものである。

【0005】

【課題を解決するための手段】 本発明が採用した手段は、静止原稿読取領域から連続原稿読取位置まで移動自在に設けたスキヤナ装置と、連続原稿読取用原稿送りローラとを備えた画像読取装置において、スキヤナ装置の移動及び原稿送りローラの回動を伝動機構を介して行う一個の駆動用モータを備え、該伝動機構は、静止原稿読取のときには静止原稿読取領域でスキヤナ装置を移動させ、連続原稿読取のときには連続原稿読取位置にスキヤナ装置を停止させると共に原稿送りローラを回動させるようにしたことである。

【0006】 本発明にあつては、一個の駆動用モータでスキヤナ装置の移動及び原稿送りローラの回動を行うことができ、静止原稿読取のときの静止原稿読取領域でのスキヤナ装置の移動と、連続原稿読取のときの連続原稿読取位置でのスキヤナ装置の停止及び原稿送りローラの回動とを伝動機構で選択できる。

【0007】 前記伝動機構は、前記スキヤナ装置を移動させる歯付ベルトに噛合する駆動プーリと、前記モータに連結し且つ該駆動プーリと一体に回転する駆動ギヤと、前記原稿送りローラを回動させる従動ギヤと、前記スキヤナ装置が連続原稿読取位置に到達するときにスキヤナ装置と共に移動して駆動ギヤと従動ギヤとに噛合する中間ギヤとを備え、歯付ベルトは、スキヤナ装置が連続原稿読取位置に到達したときに駆動プーリと噛合しないように欠歯領域を形成することもある。

【0008】 前記伝動機構が前記歯付ベルト及び中間ギヤ等を備えた場合には、静止原稿読取のときには中間ギヤが駆動ギヤと従動ギヤとに噛合しないため、モータの駆動力が駆動プーリを介して歯付ベルトに伝達してスキヤナ装置を移動させ、連続原稿読取のときには中間ギヤが駆動ギヤと従動ギヤとに噛合すると共に駆動プーリと歯付ベルトが噛合しないため、モータの駆動力が駆動ギヤと中間ギヤと従動ギヤとに順次伝達して原稿送りローラのみを回動させる。

【0009】 本発明は、前記スキヤナ装置を連続原稿読取位置で静止させるためのストッパを備えることもある。

【0010】

【発明の実施の形態】 以下、本発明に係る画像読取装置を図面に示す実施の形態に基づいて説明する。

【0011】 (第1の実施の形態) 図1乃至図3は本発明の第1の実施の形態を示すものであり、図1は全体の概要を示す中間省略した側面図、図2は要部を拡大したものであつて原稿送りローラのみを回動させる状態を示す側面図、図3は要部を拡大したものであつてスキヤナ装置のみを移動させる状態を示す側面図である。

【0012】 画像読取装置1は、図1に示す如く、静止原稿読取機能と連続原稿読取機能とを併備したものである。静止原稿読取の場合には、プラテンガラス2上に置かれている原稿(図示省略)を、プラテンガラス2の下

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で副走査方向（矢符A方向）へ往復移動する光源を備えたスキヤナ装置3で走査して読み取る。連続原稿読取の場合には、回転する原稿送りローラ4で一枚ずつ送られる原稿を、連続原稿読取位置Cに静止するスキヤナ装置3で走査して読み取る。

【0013】該画像読取装置1の特徴は、スキヤナ装置3の移動と原稿送りローラ4の回転とを、伝動機構5を介して一個の駆動用モータ6で選択できるようにしたことである。伝動機構5は、静止原稿読取のときには静止原稿読取領域Bでスキヤナ装置3を往復移動させ、連続原稿読取のときには連続原稿読取位置Cにスキヤナ装置3を停止させると共に原稿送りローラ4のみを回転させるように構成してある。

【0014】該伝動機構5は、副走査方向（矢符A方向）の両端寄りに配置した歯付ベルト用プーリ7、8と、両プーリ7、8間に張架し且つスキヤナ装置3に連結13したエンドレス状の歯付ベルト9と、図2に示すモータ6の出力軸6aに連結し且つ駆動プーリ7と一体に回転する駆動ギヤ10と、原稿送りローラ4を回転させる従動ギヤ11と、駆動ギヤ10と従動ギヤ11との間に配置した中間ギヤ12とを備えている。中間ギヤ12は、スキヤナ装置3に回転自在に取着され、スキヤナ装置3が連続原稿読取位置Cに到達したときにのみ駆動ギヤ7と従動ギヤ8とに噛合するようになっている。歯付ベルト9は、スキヤナ装置3が連続原稿読取位置Cに到達したときに、駆動プーリ7と噛合しないように歯9aの欠如した欠歯領域9bを形成してある。

【0015】上記中間ギヤ12は、モータ6の駆動により駆動プーリ7が矢符F方向へ回転するに伴い、連続原稿読取位置Cに向かって移動するスキヤナ装置3と共に移動して駆動ギヤ10及び従動ギヤ11との噛合を開始する。噛合を開始した中間ギヤ12は、駆動ギヤ10からの伝達力を受けて矢符E方向へ付勢されるので、安定した噛合を維持する。更に、スキヤナ装置3は、この付勢力を受けて、ストツバ14を押圧するように当接し、停止状態を維持する。スキヤナ装置3がストツバ14に当接して停止しているときには、歯付ベルト9の欠歯領域9bが駆動プーリ7に巻回して駆動プーリ7を空回りさせるので、モータ6の駆動力を歯付ベルト9に伝達させない。

【0016】連続原稿読取位置Cに停止している連続原稿読取状態のスキヤナ装置3を静止原稿読取領域Bへ移動させるためには、モータ6を逆回転させる。モータ6の逆回転により駆動ギヤ10及び駆動プーリ7が矢符G方向へ回転すると、中間ギヤ12は、駆動ギヤ10からの伝達力で矢符H方向へ付勢され、スキヤナ装置3及び歯付ベルト9と共に移動を開始する。移動を開始した歯付ベルト9は、図3に示す如く、駆動プーリ7に対する歯9aの噛合を開始して、スキヤナ装置3を矢符H方向へ移動させて静止原稿読取領域B（図1参照）へ導く。

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【0017】なお、前記中間ギヤ12は、スキヤナ装置3に取着する構造に限定されるものではなく、図示は省略しが、駆動ギヤ10及び従動ギヤ11に噛合する噛合位置と両ギヤ10、11に噛合しない非噛合位置との間で、スキヤナ装置3の移動方向に沿って揺動自在となるように配置することも可能である。この場合の中間ギヤ12は、スキヤナ装置3が静止原稿読取領域Bに位置するときには、非噛合位置に向かってバネで付勢され、スキヤナ装置3が連続原稿読取位置Cに到達するときには、該バネの付勢力に抗してスキヤナ装置3で押圧されて噛合位置へ移動するように構成する。

【0018】前記従動ギヤ11は、図1に示す如く、従動ギヤ11と一体に回転するプーリ15と中間プーリ16とに歯付ベルト18を張架すると共に、中間プーリ16と原稿送りローラ4と一体に回転するプーリ17とに歯付ベルト19を張架して、モータ6からの駆動力を原稿送りローラ4へ伝達するようにしてある。なお、従動ギヤ11は、原稿送りローラ4と一体に回転するように構成して、中間プーリ16等を省略することも可能である。

【0019】前記スキヤナ装置3は、光源と受光素子とを一体に組み込んだ形式のものや、図示は省略したが、光源を歯付ベルト9で移動させると共に反射鏡を光源の移動速度の半分の速度で移動させ、固定配置した受光素子で反射光を受光する形式のものが適宜選択される。

【0020】（第2の実施の形態）図4は本発明に係る画像読取装置の第2の実施の形態を示すものであり、スキヤナ装置を移動させる状態を示す部分切欠きした側面図である。

【0021】本実施の形態が前記第1の実施の形態と相違する点は、伝動機構20である。伝動機構20は、駆動プーリ7と歯付ベルト9とが常時噛合するように歯付ベルト9に欠歯領域の無いものを用いると共に、駆動プーリ7と一体に回転する従動ギヤ21及び従動ギヤ11のいずれか一方に駆動ギヤ22を選択的に噛合させるようにしたことである。この相違点以外の構造は、前記第1の実施の形態と実質的に同一であり、同一符号は同一構成部材を示す。

【0022】上記駆動ギヤ22は、駆動用モータ6の出力軸6aを中心に揺動自在に枢支したアーム23に回転自在に軸支すると共に、出力軸6aに固着した出力ギヤ24と噛合するようにしてある。駆動ギヤ22は、アーム23を揺動させるソレノイド等からなる操作具25の操作で移動する。静止原稿読取のときには、駆動ギヤ22を従動ギヤ21に噛合させることにより、静止原稿読取領域B（図1参照）でスキヤナ装置3を往復移動させる。逆に、連続原稿読取のときには、連続原稿読取位置Cにスキヤナ装置3を到達させた直後に、駆動ギヤ22を従動ギヤ11に噛合させることにより、原稿送りローラ4を回転させる。

【0023】

【発明の効果】請求項1記載の本発明に係る画像読取装置は、スキヤナ装置の移動及び原稿送りローラの回動を一個の駆動用モータで兼用するため、コストの低減と重量の軽減とを図ることができる。

【0024】請求項2記載の本発明に係る画像読取装置は、簡単な構造で実現することができるため、更にコストの低減と重量の軽減とを図ることができる。

【0025】請求項3記載の本発明に係る画像読取装置は、スキヤナ装置を静止させるためのセンサ等が不要となる。

【図面の簡単な説明】

【図1】本発明の第1の実施の形態を示すものであり、全体の概要を示す中間省略した側面図である。

【図2】同実施の形態における要部を拡大したものであ

つて、原稿送りローラのみを回動させる状態を示す側面図である。

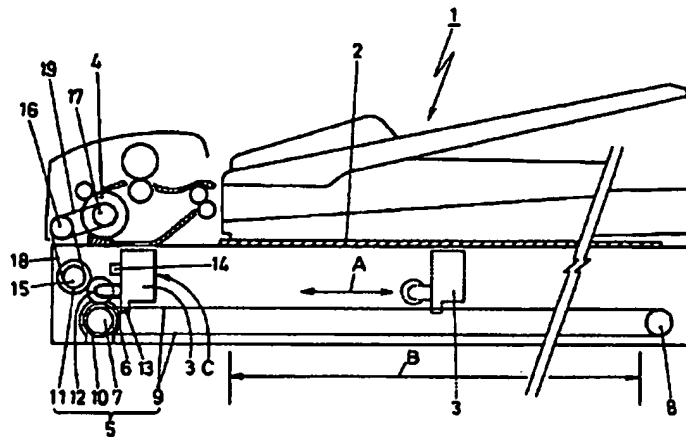
【図3】同実施の形態における要部を拡大したものであつて、スキヤナ装置のみを移動させる状態を示す側面図である。

【図4】本発明の第2の実施の形態における要部を拡大したものであつて、スキヤナ装置を移動させる状態を示す部分切欠きした側面図である。

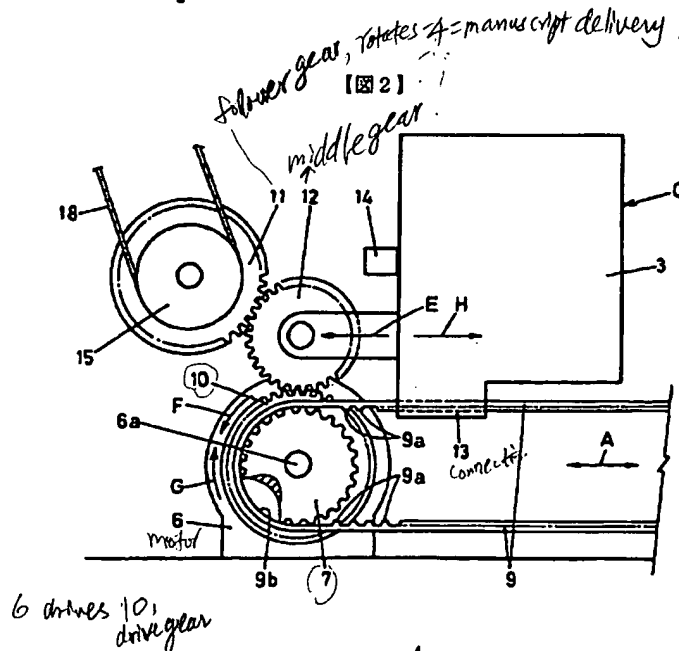
【符号の説明】

- 3…スキヤナ装置
- 4…連続原稿読取用原稿送りローラ
- 5…伝動機構
- 6…駆動用モータ
- B…静止原稿読取領域
- C…連続原稿読取位置

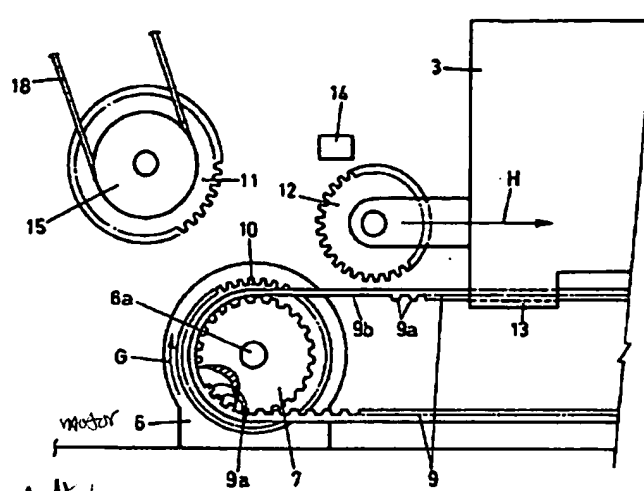
【図1】



【図2】



【図3】



【図4】

